

AMENDMENT TO THE CLAIMS

The entire set of pending claims, including amendments to the claims, is submitted herewith pursuant to 37 CFR § 1.121(c)(3). This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Presently amended) A coronary sinus accessing system, comprising:
 - a. an elongated tubular support member configured for intravascular advancement to a right atrium, comprising:

an elongated shaft which has proximal and distal shaft sections and a first lumen extending within the proximal and distal shaft sections; and

a distal tip which has an opening providing exterior access to, and in fluid communication with, the first lumen in the elongated shaft and which is oriented at an angle with respect to a longitudinal axis of the shaft;
 - b. a guide member which has proximal and distal shaft sections, which is disposed within the first lumen of the tubular support member, which is configured for longitudinal movement through the first lumen and out the distal tip opening and which has a distal extremity configured for entry into a coronary sinus ostium; and
 - c. a stabilizing member deployable outside the tubular support member through an opening at the distal section of the elongated shaft and configured to maintain alignment of the tubular support member within the right atrium, the tubular support member rotatable configured to rotate about a longitudinal axis of the stabilizing member when the stabilizing member is deployed outside the tubular support member.

2. (Original) The accessing system of the claim 1 wherein the tubular support member has a second lumen extending therein.
3. (Original) The accessing system of claim 2 wherein the stabilizing member has an elongated core and a flexible body disposed about a distal portion of the core and is configured to be slidably advanced through the second lumen extending within the tubular support member.
4. (Previously presented) The accessing system of claim 3 wherein the stabilizer member has a distal section which is configured to be seated within an apex of a right ventricle.
5. (Original) The accessing system of claim 4 wherein the distal section of the stabilizer member has a J-shape.
6. (Original) The accessing system of claim 3 wherein the stabilizer member has a plurality of indicia on the core thereof to measure axial movement of the tubular support member.
7. (Original) The accessing system of claim 2 wherein the distal shaft section of the tubular support member is provided with an electrode.
8. (Original) The accessing system of claim 1 wherein the guide member has an inner lumen extending therein.
9. (Original) The accessing system of claim 1 wherein the guide member has an electrode on the distal shaft section thereof.

10. (Original) The accessing system of claim 9 wherein the proximal shaft section of the guide member has a second proximal extension with an electrical connector thereof electrically connected to the electrode on the distal shaft section thereof.

11. (Original) The accessing system of claim 10 wherein the electrical connector is electrically connected to the electrode on the distal shaft section by means of a conductor.

12. (Original) The accessing system of claim 1 wherein the distal tip of the tubular support member is oriented at an angle of about 20° to about 70° with respect to a longitudinal axis of the shaft

13. (Original) The accessing system of claim 1 wherein the distal tip of the tubular support member is oriented at an angle of about 30° to about 60°.

14. (Previously presented) A tubular support member configured for intravascular advancement through a patient's vasculature to a right atrium thereof, comprising:

a. an elongated shaft which has proximal and distal shaft sections, a longitudinal axis and at least first and second lumens extending through the proximal and distal shaft sections;

b. a distal tip on the distal shaft section oriented at an angle with respect to the longitudinal axis of the shaft, the distal tip having a first opening providing external access to, and in fluid communication with, the first lumen and configured to facilitate advancement of a guide member through the first opening; and

c. a second opening in the distal shaft section providing external access to, and in fluid communication with, the second lumen in the elongated

shaft and configured to facilitate advancement of a stabilizing member through the second opening and into the right atrium, a longitudinal axis of the second lumen aligned relative to the second opening to facilitate rotation of the tubular support member about a longitudinal axis of the stabilizing member when the stabilizing member is deployed beyond the second opening.

15. (Previously presented) The member of claim 14 wherein the distal tip of the tubular support member is oriented at an angle of about 20° to about 70° with respect to a longitudinal axis of the shaft.

16. (Previously presented) The member of claim 14 wherein the distal tip of the tubular support member is oriented at an angle of about 30° to about 60°.

17. (Presently amended) A method for accessing a coronary sinus comprising:

a. providing an accessing system ~~having components as set forth in claim 1, comprising;~~

an elongated tubular support member configured for intravascular advancement to a right atrium, comprising:

an elongated shaft which has proximal and distal shaft sections and a first lumen extending within the proximal and distal shaft sections; and

a distal tip which has an opening providing exterior access to, and in fluid communication with, the first lumen in the elongated shaft and which is oriented at an angle with respect to a longitudinal axis of the shaft;

a guide member which has proximal and distal shaft sections, which is disposed within the first lumen of the tubular support member, which is

configured for longitudinal movement through the first lumen and out the distal tip opening and which has a distal extremity configured for entry into a coronary sinus ostium; and

a stabilizing member deployable outside the tubular support member at the distal section of the elongated shaft and configured to maintain alignment of the tubular support member within the right atrium;

b. percutaneously introducing the components of the system into a venous system and advancing the system components within the venous system until the distal extremity of the tubular support member is disposed and stabilized within the right atrium; and

c. extending the guide member out of the opening in the distal tip of the tubular support member until the distal end of the guide member enters the coronary sinus ostium.

18. (Presently amended) A method of treating a heart, comprising:

a. providing a coronary accessing system ~~having components set forth in claim 1, comprising;~~

an elongated tubular support member configured for intravascular advancement to a right atrium, comprising:

an elongated shaft which has proximal and distal shaft sections and a first lumen extending within the proximal and distal shaft sections; and

a distal tip which has an opening providing exterior access to, and in fluid communication with, the first lumen in the elongated shaft and which is oriented at an angle with respect to a longitudinal axis of the shaft;

a guide member which has proximal and distal shaft sections, which is disposed within the first lumen of the tubular support member, which is configured for longitudinal movement through the first lumen and out the distal tip

opening and which has a distal extremity configured for entry into a coronary sinus ostium; and

a stabilizing member deployable outside the tubular support member at the distal section of the elongated shaft and configured to maintain alignment of the tubular support member within the right atrium;

b. introducing the components of the coronary accessing system into a venous system and advancing the system components within the venous system until the distal extremity of the tubular support member is disposed and stabilized within the right atrium;

c. extending the guide member out of the opening in the distal tip of the tubular support member until the distal end of the guide member enters the coronary sinus ostium; and

d. advancing an elongated intravascular device through or over the guide member, into a coronary sinus.

19. (Presently amended) A coronary sinus accessing system, comprising:

a. a tubular support means configured for intravascular advancement to a right atrium, comprising:

an elongated shaft which has proximal and distal shaft sections, a longitudinal axis and a first lumen extending within the proximal and distal shaft sections; and

a distal tip which has an opening providing external access to, and in fluid communication with, the first lumen in the elongated shaft and which is oriented at an angle with respect to the longitudinal axis of the shaft;

b. a guide means which is slidably disposed within the first lumen of the tubular support means, which is configured for longitudinal movement through the first lumen and out the distal tip opening and which has a distal

extremity configured for entry into a coronary sinus ostium and a delivery therein of a therapeutic or diagnostic device; and

c. a stabilizing means deployable outside the tubular support means through an opening at the distal section of the elongated shaft and configured to maintain the alignment of the tubular support means within the right atrium, the tubular support means rotatable configured to rotate about a longitudinal axis of the stabilizing means when the stabilizing means is deployed outside the tubular support means.

20. (Previously presented) A coronary sinus accessing system, comprising:

an elongated tubular support member configured for intravascular advancement to a right atrium, the elongated tubular support member comprising an elongated shaft having proximal and distal shaft sections and a first lumen extending within the proximal and distal shaft sections, the elongated tubular support member further comprising a distal tip having a first opening providing exterior access to, and in fluid communication with, the first lumen, and a second opening, the distal tip oriented at an angle with respect to a longitudinal axis of the shaft;

means, deployable through the first lumen and the first opening, for entering a coronary sinus ostium; and

means, deployable outside the tubular support member via the second opening, for stabilizing the tubular support member within the right atrium, the tubular support member rotatable about a longitudinal axis of the stabilizing means when the stabilizing means is deployed outside the tubular support member.

21. (Previously presented) The accessing system of claim 1 wherein the tubular support member is rotatable about the longitudinal axis of the stabilizing member through a sweep angle greater than or equal to 360°.

22. (Previously presented) The accessing system of claim 1 wherein the tubular support member is rotatable about the longitudinal axis of the stabilizing member through a sweep angle no greater than 360°.

23. (Previously presented) The accessing system of claim 1 wherein the stabilizing member comprises two or more stabilizing arms each configured to contact a heart chamber wall.

24. (Previously presented) The accessing system of claim 23 wherein the heart chamber wall comprises a wall of the right atrium.

25. (Previously presented) The accessing system of claim 23 wherein the tubular support member is rotatable about the longitudinal axis of the stabilizing member through a sweep angle limited by an angle defined between adjacent ones of the two or more stabilizing arms.

26. (Previously presented) The member of claim 14 wherein the elongated shaft is rotatable about the longitudinal axis of the stabilizing member through a sweep angle no greater than 360°.

27. (Previously presented) The member of claim 14 wherein the elongated shaft is rotatable about the longitudinal axis of the stabilizing member through a sweep angle limited by the stabilizing member.

28. (Previously presented) The method of claim 17 comprising:

extending the stabilizing member beyond a distal end of the tubular support member; and

contacting a heart chamber wall using the stabilizing member.

29. (Previously presented) The method of claim 28 wherein contacting the heart chamber wall comprises contacting the heart chamber wall at a plurality of spaced-apart locations.

30. (Previously presented) The method of claim 28 wherein the heart chamber wall comprises a wall of the right atrium.

31. (Previously presented) The method of claim 28 wherein the heart chamber wall comprises a wall of the right ventricle.

32. (Previously presented) The method of claim 28 comprising rotating the tubular support member relative to the longitudinal axis of the stabilizing member through a sweep angle such that the guide member sweeps through an angle equal to the sweep angle.

33. (Previously presented) The method of claim 32 wherein the sweep angle is greater than or equal to 360°.

34. (Previously presented) The method of claim 32 wherein the sweep angle is no greater than 360°.

35. (Previously presented) The method of claim 18 comprising:
extending the stabilizing member beyond a distal end of the tubular support member; and
contacting a heart chamber wall using the stabilizing member.

36. (Previously presented) The method of claim 28 wherein contacting the heart chamber wall comprises contacting the heart chamber wall at a plurality of spaced-apart locations.

37. (Previously presented) The method of claim 28 wherein the heart chamber wall comprises a wall of the right atrium.

38. (Previously presented) The method of claim 28 wherein the heart chamber wall comprises a wall of the right ventricle.

39. (Previously presented) The method of claim 28 comprising rotating the tubular support member relative to the longitudinal axis of the stabilizing member through a sweep angle such that the guide member sweeps through an angle equal to the sweep angle.

40. (Previously presented) The method of claim 39 wherein the sweep angle is greater than or equal to 360°.

41. (Previously presented) The method of claim 39 wherein the sweep angle is no greater than 360°.

42. (Previously presented) The system of claim 20 wherein the stabilizing means comprises engaging means for engaging a wall of the right atrium at a plurality of space-apart locations.

43. (Previously presented) The system of claim 20 wherein the stabilizing means comprises engaging means for engaging a portion of the right ventricle.

44. (Previously presented) The system of claim 20 wherein the tubular support member is rotatable about the longitudinal axis of the stabilizing means through a sweep angle greater than or equal to 360°.

45. (Previously presented) The system of claim 20 wherein the tubular support member is rotatable about the longitudinal axis of the stabilizing means through a sweep angle no greater than 360°.